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Aspire Public Schools - College for Certain, LLC

DRAFT
Operation and Maintenance Plan for Cap Mitigation Measures

Aspire Public Schools - College for Certain, LLC
Former Pacific Electric Motors Site
1009 66th Avenue
Oakland, California
(Alameda County Department of Environmental Health Fuel Leak Case Number RO0000411)

October 15, 2013~~October __, 2011September XX,~~

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ARCADIS

Ron Goloubow, P.G. (8655)
Principal Geologist

DRAFT
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Aspire Public Schools - College for Certain, LLC
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1009 66th Avenue,
Oakland, California
(Fuel Leak Case Number RO0000411)

Prepared for:
Aspire Public Schools - College for Certain, LLC
1001 22nd Avenue Suite 100
Oakland, California 94606

Prepared by:
ARCADIS U.S., Inc.
2000 Powell Street, Suite 700
Emeryville, CA 94608
Tel 510 652 4500
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Our Ref.:
EM009155.0010

Date:
~~October __, 2011~~~~September XX~~October 15, 2013

Commented [c2]: The Site is the Aspire Public School (AKA: Former Pacific Electric Motors Site).

Commented [c3]: Is this being prepared also for Aspire Public School?

Commented [c4]: Update to April ___, 2013

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Commented [c5]: Please provide latest versions of the checklist for inspection of engineering controls.

Commented [c6]: What is basis for a 5 year review?

Commented [c7]: Soil Management Plan is an Appendix to the Cap O&M Plan. Is the SMP mentioned at all in the Cap O&M Plan? It may make sense to combine the SMP within one section of the Cap Plan and not as an appendix. The Cap O&M Plan already includes a site background and any background information included in the SMP and not in the Cap Plan could be added to the Cap Plan background.

ARCADIS

Operation and Maintenance Plan for Cap Mitigation Measures

Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California

1. Operation and Maintenance Overview

1.1 Introduction

On behalf of Aspire Public Schools (Aspire) and College for Certain, LLC (CFC), ARCADIS U.S., Inc. (ARCADIS) has prepared this Operation and Maintenance (O&M) Plan for the surface cap ~~remedy~~ installed at the former Pacific Electric Motors (PEM) site located at 1009 66th Avenue, Oakland, California (the Site; Figures 1 and 2). The purpose of the surface cap is to mitigate the exposure to soil containing polychlorinated biphenyls (PCBs) and other contaminants (e.g., lead and arsenic) at the Site. The surface cap will be in place at the Site in perpetuity. ~~while the property is under its current land use.~~ Should the land use change and/or the current structures (e.g., foundations, slab, pavement, and landscape areas that comprise the cap) are to be modified and/or removed, then the land owner will be obligated to contact the U.S. Environmental Protection Agency (U.S. EPA) and the Alameda County Department of Environmental Health (ACEH) to present the new land use and plan to mitigate ~~the~~ soil ~~that contains~~containing PCB, lead, and arsenic that is present at the Site.

Specific sampling and health and safety procedures to be implemented during future site modification that could disturb site soil, such as the repair of a subsurface utility at the Site are presented in the Soil Management Plan (SMP) that is included as Appendix ~~A~~B to this document.

This O&M Plan is incorporated into the Land Use Covenant that is to be placed on the deed for this property. ~~Please note that LFR Inc. (LFR) conducted environmental work at the Site and LFR was incorporated into ARCADIS in December 2008. The legal description of the Site is provided in Appendix A.~~ This O&M Plan includes procedures for:

1. Long-term operation, maintenance, ~~and~~ monitoring (inspection), and repair of the engineering controls~~;~~ ~~(maintain, and repair~~i.e., the cap [~~(~~including all of its components]~~)~~ in perpetuity; and

2. Management of soils containing ~~polychlorinated biphenyls (~~PCBs~~)~~ and other contaminants ~~(e.g. lead and arsenic)~~ at the Site.~~:~~

Commented [c8]: Is this the umbrella, legally responsible entity for the Aspire Public School? Or is the document being prepared on behalf of both Aspire Public School and College for Certain?

Commented [c9]: The cap is also mitigating other contaminants present at the site since PCBs are not the only contaminant.

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Commented [c10]: See comment 11.

Commented [c11]: If the land use changes and/or the current structures (e.g., foundations, slab, pavement, and landscape areas that comprise the cap) are to be modified and/or removed, the owner or its successors must contact USEPA R9 concerning such plans consistent with the requirements in the land use covenant for the Aspire Public School at 1009 66th Avenue, Oakland, CA.

Commented [c12]: The procedures are to inspect, maintain, and repair the cap (including all of its components) in perpetuity.

Commented [c13]: The soils contaminated with PCBs may also contain other contaminants (e.g., arsenic, lead).

1.2 Background

Activities conducted at the Site by previous owners and operators of the property resulted in the presence of soil ~~affected~~ containing~~by~~ total petroleum hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), TPH as motor oil (TPHmo), arsenic, lead, semivolatile organic compounds (SVOCs), PCBs, and volatile organic compounds (VOCs). The removal action(s) were conducted in accordance with the following ~~two~~ documents:

- Revised Corrective Action Plan, Proposed Aspire High School Site, 1009 66th Avenue, Oakland, California, dated July 17, 2009 (the revised CAP; ARCADIS 2009a)~~. and~~

- Self-Implementing Cleanup Plan (SICP) presented in a letter to the ~~U.S. Environmental Protection Agency (~~U.S. EPA~~)~~ dated October 23, 2009 (ARCADIS 2009b) as modified by ARCADIS' November 18, 2009 (ARCADIS 2009c) and January 14, 2010 (ARCADIS 2010a) letters and U.S. EPA's conditional approvals.

- U.S. EPA's November 13, 20~~13~~09 letter conditionally approving (Original Approval) ARCADIS' SICP (U.S. EPA 2009a) and U.S. EPA's amendments to that approval (Subsequent Approvals) dated April 5 and June 16, 2011 (U.S. EPA 2011a, 2011b). U.S. EPA's Original and Subsequent Approvals modified ARCADIS' SICP and ARCADIS' amendments to the SICP.

In order to mitigate any exposure to soil containing PCBs~~-affected soil~~ that ~~may be~~ is present at the Site, CFC has installed a surface cover (a cap) across the entire Site consisting of both hardscaped and landscaped areas. Details regarding this cap are provided on Figure ~~2~~3. The thicknesses of the various elements of the cap were approved by the U.S. EPA in their letters to CFC dated April 5 and June 16, 2011 (U.S. EPA 2011a, ~~and U.S. EPA~~ 2011b).

1.2.1 Revised Corrective Action Plan

The Revised CAP summarized the results of previous investigations, presented the site conceptual model, quantified the baseline risk of constituents of concern (COCs), developed site-specific risk-based cleanup goals, evaluated potential remedies, and presented an implementation plan for the selected remedies. Remedial activities conducted at the Site included completion of the excavation activities as presented in the Revised CAP (ARCADIS 2009a) and the operation of the soil-vapor extraction/air

Commented [c14]: This phrase and other similar phrases such as "PCB affected soils" must be replaced with either contaminated soils or when specific to PCBs use either "PCB-containing soils" or "PCB –contaminated soils." Please make these changes throughout the entire document.

Commented [c15]: See Comment 14.

Commented [c16]: After "a surface cover," add : "(a cap)."

sparging (SVE/AS) system. The revised CAP was approved by the ~~Alameda County Department of Environmental Health (~~ACEH~~)~~ in their letter to Aspire ~~Charter Schools~~ dated August 13, 2009 (ACEH 2009). The implementation of the CAP was reported to ACEH (and U.S. EPA) in the report titled "Soil Removal Action Completion Report, College for Certain, LLC, Former Pacific Electric Motors, 1009 66th Avenue, Oakland, California (Fuel Leak Case No. RO0000411)," dated September 15, 2010 (ARCADIS ~~2010b~~2010c).

1.2.2 Self-Implementing Cleanup Plan

To address ~~affected~~ building materials and soil containing PCBs at the Site, ARCADIS prepared a SICP and submitted the document to the U.S. EPA on October 23, 2009 (ARCADIS 2009b). The SICP received conditional approval from the U.S. EPA in its letter to Aspire dated November 13, 2009 (Approval Letter; U.S. EPA 2009a). The conditions provided in the Approval Letter were addressed in a letter transmitted by ARCADIS to the U.S. EPA dated November 18, 2009 (ARCADIS 2009c). The scope of the SICP was further refined in an e-mail message from representatives of the U.S. EPA to ARCADIS dated November 25, 2009 (U.S. EPA 2009b).

The removal of the soil (and building materials) ~~affected by~~containing PCBs was documented in a letter report that was prepared in accordance with the Toxic Substance Control Act (TSCA) and transmitted to U.S. EPA on August 13, 2010 (the TSCA Report; ARCADIS 2010b) and the Revised Draft PCB Cleanup Completion Report dated October 15, 2013 (ARCADIS 2013~~a~~).

The SICP addressed the following PCB-related issues:

- The demolition of structures and associated infrastructure formerly located on the Site.
- The collection and analysis of additional soil samples and samples of the building materials associated with the former warehouses that were demolished in January 2010.
- The remediation (excavation) of four areas of the Site where soil containing PCBs ~~affected soil~~ had been identified through soil samples collected at the Site.

Following the implementation and completion of the SICP activities, ARCADIS prepared a summary letter report documenting the removal of the PCB-

Commented [c17]: See Comment 14.

Commented [c18]: See Comment 14.

Commented [c19]: We have requested the "Addendum Report" be turned into the PCB cleanup completion report with any site characterization reports included as attachments to the cleanup report.

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Commented [c20]: See Comment 14.

containing~~affected~~ soil at the Site (the Summary Report; ARCADIS ~~2010a~~2010c). That report was prepared in accordance with §40 Code of Federal Regulations (CFR) §761.125(c)(5) to describe the implementation of the TSCA SICP at the Site.

As discussed in conference calls and through the exchange of e-mail messages, the analytical results of confirmation soil samples collected at some locations at the Site during the SICP indicate that there are 12 locations where PCB-~~affected~~ containing soil at concentrations greater than the cleanup criteria of 0.130 milligram per kilogram (mg/kg) is ~~was~~ still present at the Site after the SICP was completed and prior to grading at the Site (ARCADIS 2013~~a~~). The locations of the confirmation soil samples that contained PCB~~-affected soil~~ at concentrations greater than the cleanup criteria are illustrated on Figure ~~2~~3. However, due to geotechnical work conducted to strengthen site soils for the redevelopment of the Site, the soil currently in those 12 locations may have been moved. Thus the PCB-containing soil may be at locations that are not represented by the samples collected in those locations before the geotechnical and grading work. The geotechnical work to strengthen the soil included the cement treatment of the upper 18 inches of soil across the Site. This may have resulted in the movement of soil at the 12 locations where PCBs were detected at concentrations greater than the cleanup goal. ~~***this paragraph must be consistent with the cleanup report.***~~ ProUCL calculations prior to grading and geotechnical work at the site demonstrated the 95% Upper Confidence Limit (UCL; ~~(~~0.174 mg/kg total PCBs) was slightly higher than the cleanup level of 0.13~~0~~ total PCBs.

In addition to the confirmation soil samples that failed the cleanup criteria, approximately ~~10~~ 25 yards of soil that contained PCBs at concentrations greater than the cleanup criteria was encapsulated on site at the area of the Site where soil containing ~~affected~~ PCBs was already to remain in place at soil sample identifications W1-WSDWall 2' and W2-WSDWall 2', depicted on Figure ~~2~~3. The encapsulated soil was ~~wrapped in Geotextile fabric and~~ placed at an elevation of approximately 2.5 to 3 feet set to the City of Oakland Vertical Datum, which is equivalent to approximately 5 feet below the surface of the pavement in this area of the Site. The~~,~~ excavation where the soil was placed was lined with Geotextile fabric and the encapsulated soil was also covered with Geotextile fabric prior to raising the grade and compacting the area.~~at an elevation of approximately 2.5 to 3 feet set to the City of Oakland Vertical Datum, which is equivalent to approximately 5 feet below the surface of the pavement in this area of the Site.~~

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Commented [c21]: Revise this paragraph in light of the March 22, 2013 conference call. The 12 locations are the locations for soil samples collected before grading of the site. Such information is currently depicted in figures. However, due to geotechnical work to strengthen site soils for construction and grading of the site, the soil currently in those 12 locations is not represented by the samples collected in those locations before the geotechnical and grading work. After revised, this paragraph must be consistent with the cleanup report. ProUCL calculations prior to grading and geotechnical work at the site demonstrated the 95% UCL (0.174 mg/kg total PCBs) was slightly higher than the cleanup level of 0.13 total PCBs.

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Commented [c22]: Please verify the 10 cubic yards. Our understanding is that about 25 cubic yards of soil were consolidated in the EXCPCB3 area. The soils were not encapsulated. The soils were consolidated and then a site-wide cap covered the soils.

Commented [c23]: See Comment 14.

Commented [c24]: See Comment 22.

Commented [c25]: Were the soils actually wrapped in Geotextile or was a geotextile placed at the bottom of the excavation and the soils consolidated over that liner and then covered?

Yes

Commented [c26]: See Comment 22.

Commented [c27]: Were the soils actually wrapped in Geotextile or was a geotextile placed at the bottom of the excavation and the soils consolidated over that liner and then covered?

Yes

As presented in the ~~Summary Report~~Draft Revised Cleanup Completion Report (ARCADIS 2013), the following procedures have been implemented at the Site to ensure that the potential exposure to these soils will be mitigated:

- Installation of a "TSCA cap" across the surface of the Site
- Preparation of a ~~deed notification~~Land Use Covenant
- Preparation of this O&M Plan (including the SMP)
- ~~Preparation of a post-redevelopment Soil Management Plan~~

The mitigation measures were implemented consistent with U.S. EPA's requirements in its June 16, 2011 letter modifying the Original Approval and the TSCA PCB regulations in 40 CFR 761.61(c). ~~These mitigation measures have been conducted in accordance with 40 CFR 761.61(a)(7) and (8), with some slight modifications approved by representatives of the U.S. EPA (U.S. EPA 2011a,b).~~

In order to prevent future exposures to ~~the~~ soil at the Site that contains PCBs at concentrations greater than 0.130 mg/kg, a cap consisting of both hardscaped and landscaped areas was installed ~~over site soil~~over the entire Site. Details regarding this cap are provided on Figure ~~2~~3. A~~n long term~~ O&M program consisting of ~~inpections~~inspections, maintenance, and repairs to the cap is required for implementation in perpetuity by the owner of the property to ~~monitor and~~ protect the installed cap ~~system~~ and ~~to~~ ensure the cap ~~that it~~ continues to provide adequate protection to site users. Intrusive activities, as defined in Section 5.~~2~~1, are prohibited at the school site unless U.S. EPA and the ~~Alameda County Health Department~~ACEH and other applicable regulatory agencies are notified of such planned modifications to the cap, the notification includes detailed plans describing the intended modifications, and U.S. EPA and ~~Alameda County Health Department~~ACEH approve such modifications. In addition, such modifications must be consistent with the provisions of the Land Use Covenant for the Aspire Golden State College Preparatory Academy~~Aspire Public School~~. The O&M Plan, if acceptable to U.S. EPA, may be used to draft the environmental restrictions of the Land Use Covenant. ~~conducted in accordance with the applicable provisions of this O&M Plan.~~

Commented [c28]: What Summary Report? Also mentioned is the "TSCA Report." To prevent confusion: in relation to PCBs we recommend that only one report that documents the site characterization and cleanup of PCBs be provided to USEPA. Such document would be a cleanup completion report including as Appendices any intermediate reports. In addition, USEPA had issues with some of the intermediate reports that were resolved informally. One example of that is the risk-based calculations not accepted by USEPA and that were included in reports submitted to USEPA prior to the Addendum Report.

Commented [c29]: The mitigation measures were implemented consistent with USEPA's requirements in its June 16, 2011 letter modifying the Original Approval and the TSCA PCB regulations in 40 CFR 761.61(c).

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Commented [c30]: The O&M Plan, if acceptable to USEPA, may be used to draft the environmental restrictions of the Land Use Covenant.

1.3 Operation and Maintenance Goals and Objectives

The primary goals of the O&M Plan are: (1) to prevent exposure to the soil containing PCBs affected soil; and (2) to protect the health of students, faculty, staff, O&M personnel, and visitors at the school site.

In order to accomplish these goals, the O&M Plan will address the following objectives:

- Minimize disturbances of PCB-containing soils;
- Describe the mitigation remedy, including the installed cap systems;
- Establish an inspection, maintenance, and repair and monitoring program to identify areas of exposed PCB-containing soils or damaged cap system, and evaluate ongoing remedy effectiveness;
- Provide for timely repair or replacement, as needed, to restore damaged cap systems (repairs to the cap will be completed within 45 days of their discovery);
- Provide for record-keeping of inspections, maintenance, and repairs, and reporting; and

Maintain Tthe records of inspections, maintenance, and repairs Maintain copies of the O&M Plan at the school sitewill be kept at the offices of both College for CertainCFC and Aspire.

.

1.4 O&M Personnel Roles and Responsibilities

CFC will retain or employ and designate the following key O&M personnel responsible for implementing the O&M Plan at the school site: O&M Coordinator and, O&M Professional, and School Site Designee. When necessary, the school will employ qualified contractors who will follow the Soil Management Plan (SMP) to perform intrusive work impacting the installed cap system at the school site. The SMP is included as Appendix DB.

Commented [c31]: See Comment 14.

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Commented [c32]: Implementation of repairs or replacements must be in accordance with a schedule. Please reference the section of the Cap Plan that includes such schedule. Inspections and maintenance must also be conducted according to a schedule. Reference the section where such schedule is found.

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Commented [c33]: The records of inspections, maintenance, and repairs should be kept at the offices of both College for Certain and the Aspire Public School.

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The names, contact information, and roles and responsibilities of key O&M personnel are included in the following sections.

1.4.1 O&M Coordinator

The O&M coordinator will have knowledge of the site conditions including the presence of the PCB--containing soil, the presence of the cap mitigating exposure to the soil, and the O&M requirements related to the cap. The role of the O&M Coordinator is to work with the O&M professional to ensure that the O&M plan is implemented at the Site.

Mala Batra / Alannah Taylor / Angela Andrews
Aspire Public Schools
1001 22nd Avenue Suite 100
Oakland, CA 94606
Phone Numbers:
(510) 434-5000 (office)
(510) 434-5010 (fax)
Mala.batra@aspirepublicschools.org
Alannah.taylor@aspirepublicschools.org
Angela.andrews@aspirepublicschools.org

The responsibilities of the O&M Coordinator are to:

- Implement the O&M Plan;
- Be familiar with site conditions and cap systems installed at the school site;
- Evaluate work orders to determine if work will be intrusive;
- Coordinate the intrusive work once the work has been approved by the U.S. EPA and ACEH;
- Accompany the O&M Professional during annual inspections;
- Submit the O&M Plan and all subsequent reports, including Annual Inspection Summary Reports, ~~Five-Year Review Reports,~~ and Intrusive Work Completion/Incident Reports to U.S. EPA and ACEH; ~~and~~
- ~~In addition the O&M Coordinator cannot make certain decisions regarding the cap~~

Commented [c34]: In reference to the O&M coordinator responsibilities outlined below, what are the technical qualifications of the designated staff to implement the Cap O&M Plan? Why isn't a trained technical person being proposed to implement the O&M Plan?

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Commented [c35]: See recommended changes for Section 1.2.2 and Comment 28. In addition the O&M Coordinator cannot make certain decisions without the approval of regulatory agencies when those decisions require regulatory agency involvement and decision making. The role of the O&M Coordinator need to be further clarified and defined to be consistent with owner responsibilities under the land use covenant.

Commented [c36]: To whom would that documentation be submitted?

- Ensure the retention of reports, forms, and records;~~.~~ and

- Ensure that activities that may disturb the cap will not be conducted at the school site without the knowledge and approval of the O&M Coordinator.~~; and~~

Note: The O&M Coordinator cannot make decisions regarding the cap without the approval of U.S. EPA and ACEH when those decisions require regulatory agency involvement and approval;

1.4.2 O&M Project Professional

1.4.2 O&M Professional

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The O&M Professional shall conduct the annual inspections. The O&M professional is defined as a California-registered engineer or geologist with expertise in conducing soil investigation and remediation (e.g., an engineer or geologist who is familiar with the cap system installed at the school site). The responsibilities of the O&M Professional are to:

- Conduct annual inspections in accordance with ~~s~~Section 4.1 below ~~(including five-year reviews)~~;

Commented [c37]: Section ___indicates that these inspections will be conducted by _____.

The O&M Professional is defined as a California-registered engineer or geologist with expertise in conducing soil investigation and remediation (e.g., an engineer or geologist who is familiar with the cap system installed at the school site).

- Prepare and sign Annual Inspection Summary Reports ~~and Five-Year Review Reports~~; and

- Perform ~~Other~~ other environmental professional work related to the school site.

~~1.4.3 School Site Designee~~

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~~School Principal:~~
~~Thomas Kadelbach~~
~~College for Certain~~
~~1009 66th Avenue~~
~~Oakland, CA~~
~~Phone: (510) 567-9631~~
~~Fax: (510) 632-1569~~
~~Thomas.Kadelbach@aspirepublicschools.org~~

~~The responsibilities of the School Site Designee are to:~~

- ~~Ensure that activities that may disturb PCB-containing soils will not be conducted~~
- ~~Ensure retention of reports, forms, and records.~~

2. Site Description

The Site is located on the northwestern side of 66th Avenue between East 14th Street and San Leandro Street (Figures 1 and 2). ~~The legal description of the Site is included as Appendix A.~~ The area around the Site is developed with a mixture of commercial, industrial, government, and multi-family residential buildings. The Site is currently owned by Aspire (CFC is a limited liability partnership that was formed by Aspire). ~~CFC.~~ Additional historical land use information for the Site was presented in the Revised CAP (ARCADIS 2009a).

The first industrial development of the property ~~was in about~~occurred around 1948 when the two buildings were constructed by PEM. PEM occupied the Site from 1948 to 2001. Activities conducted at the Site by PEM included manufacturing specialty magnets, power supplies, and components, and repairing motors, generators, transformers, and magnets. A 2,000-gallon gasoline underground storage tank (UST) was reportedly installed at the Site by PEM in 1975. In addition, the gasoline shed in the fueling area may have stored vehicle lubricants and oil for vehicle maintenance.

The structures that were on the property were demolished between November 2009 and February 2010 and the property was redeveloped into a school between March 2010 and September 2011.

2.1 Previous Site Investigations and Mitigation

PEM removed the 2,000-gallon gasoline UST and associated pump island, piping, storage shed, and appurtenances in 1995. The UST was reportedly in good condition with no holes evident; however, free-phase gasoline product was observed on the water surface in the tank excavation (W.A. Craig 1997). Approximately 1,500 cubic yards of soil were removed in two excavation iterations completed during 1995 and stockpiled on the northern portion of the Site. Approximately 116,000 gallons of petroleum hydrocarbon-contaminated ground water ~~petroleum hydrocarbon-affected groundwater~~ were pumped from the excavation. Site investigation work during this time also included drilling GeoProbe borings (between excavation iterations) in an attempt to define the lateral and vertical extent of gasoline constituents. A dewatering sump used during soil excavation was later converted to an 8-inch-diameter well (thought to

Commented [c38]: See Comment 33. In addition the role of the School Site Designee needs to be further clarified and defined. How is that role different than that of the O&M Coordinator?

Commented [c38]: See Comment 33. In addition the role of the School Site Designee needs to be further clarified and defined. How is that role different than that of the O&M Coordinator?

Commented [c39]: Is CFC still the owner of the school site?

Commented [c40]: Change “petroleum hydrocarbon-affected groundwater” to “petroleum hydrocarbon-contaminated ground water.”

be WAC-1) during backfilling operations. Backfill reportedly consisted of clean, imported fill material. Reports indicate that the stockpiled excavated soils were disposed of in 1997 (W.A. Craig 1995a, 1995b, 1995c, 1997).

A 30-foot-wide by 70-foot-long by 9-foot-deep excavation for the remediation of ~~to~~ petroleum hydrocarbon-contaminated soils ~~petroleum hydrocarbon-affected soils~~ was completed in April 2002 to the south of the original UST remedial excavation (Decon 2002a,b; Figure 2). Approximately 65,000 gallons of ~~to~~ petroleum hydrocarbon-contaminated groundwater ~~petroleum hydrocarbon-affected groundwater~~ were removed from the excavation. Additional over-excavation was performed southeast of the 30-foot by 70-foot excavation. During backfill operations, an 8-inch-diameter extraction well was installed (EW-1). The excavation was backfilled with an unspecified depth of drain rock. Approximately 250 pounds of oxygen-releasing compound (ORC) slurry were mixed into the gravel fill. Clean, excavated native soil and imported Class II base rock comprised the balance of the backfill. Approximately 219 tons of petroleum hydrocarbon-~~affected~~ contaminated soil were disposed of at an off-site facility (Decon 2002a,b). The name of the off-site disposal facility was not provided in the 2002 report.

In addition, in June 2002, a total of 25 soil borings were advanced to a depth of 13 feet below ground surface ~~(bgs)~~ in the area of the former gasoline UST. Each of these borings was backfilled with 8 pounds of ORC followed by neat cement. ORC socks were also installed in wells MW-1 and WAC-1 (Decon 2002a,b).

2.2 Revised Corrective Action Plan

ARCADIS prepared the Revised CAP for the implementation of site remedies (ARCADIS 2009a). The Revised CAP summarized the results of previous investigations, presented the site conceptual model, quantified the baseline risk of COCs, developed site-specific risk-based cleanup goals, evaluated potential remedies, and presented an implementation plan for the selected remedies.

The Revised CAP recommended excavation and off-site disposal of ~~affected~~ shallow soils with SVE/AS to remediate ~~affected~~ contaminated soil, groundwater, and vapors (ARCADIS 2009a). The Revised CAP also recommended conducting an extended SVE/AS pilot test including ozone injection, if appropriate.

Commented [c41]: What was that well used for and was ground water at the site ever tested for PCBs?
gw was NOT tested for PCBs

Commented [c42]: Change "petroleum hydrocarbon-affected soils" to petroleum hydrocarbon-contaminated soils."

Commented [c43]: See Comment 36.

Commented [c44]: See Comment 37.

Commented [c45]: What off-site facility, please identify and include the name of the facility.

The specific facility was not cited in the Report that documented this work.

Commented [c46]: Change "affected shallow soil" to "contaminated shallow soil."

Commented [c47]: Change "remediate affected soil," to "remediate contaminated soil."

2.2.1 Soil Excavation and Removal

Between November 2009 and August 2010, soil excavation activities were completed at the Site. This work resulted in the removal of approximately 8,~~900~~ 400 tons of ~~affected~~ contaminated soil from the Site that was transported to either Chemical Waste Management Hazardous Waste Landfill ~~Waste Management's Kettleman Hills Class I Landfill~~ located in Kettleman City, California or Republic Waste's Vasco Road Class II Landfill located in Livermore, California~~.~~ (see the following table).

Soil Disposal Summary

Destination	Waste Classification	Volumes (tons)
Kettleman Hills Landfill	PCB-TSCA (50 mg/kg & greater)	1,280.85
Kettleman Hills Landfill	Non-RCRA (Lead)	1,977.83
Vasco Road Landfill	Non-Hazardous	5,102.04
Keller Canyon Landfill	Construction Debris (includes building demolition debris)	2,476.60

To ensure that the removal activities successfully met the cleanup goals, the 95% ~~upper confidence limit (~~UCL~~)~~ of the cleanup confirmation soil sample data was calculated for each COC and compared with their respective cleanup goal. The results of this analysis indicated that concentrations of TPHmo and PCBs (up to 2.5 mg/kg) remained in soil at the Site at concentrations greater than the cleanup goals. The potential human health risks associated with ~~the presence~~ residual concentrations of PCBs in soils ~~will be~~is being mitigated by the installation of the TSCA Cap.

2.3 Post-Mitigation Site Conditions

The newly completed Aspire Golden State College Preparatory Academy ~~College for Certain School~~ serves grades 6 through 12, with capacity for 570 students, and ~~the school~~ opened in August 2011. The school occupies approximately 1.4 acres and consists of:

- 3 two-story buildings (approximately 41,430 square feet total including 24 full-sized classrooms, 4 labs, 3 girls and 3 boys restrooms, and 4 staff restrooms);
- An asphalt-paved parking area with access via two driveways on 66th Avenue (one for ingress and one for egress);
- An asphalt-paved area for basketball; and

Commented [c48]: Change "affected soil from the Site" to "contaminated soil from the Site."

Commented [c49]: The name of the landfill is Chemical Waste Management Hazardous Waste Landfill. This paragraph should be rewritten to clearly distinguish the PCB concentration in the soils disposed at CWM landfill in contrast to the soils disposed at the Vasco Road Class II Landfill.

Commented [c50]: For clarity, we recommend the minimum to maximum PCB concentration be mentioned rather than just stating that "concentrations greater than the cleanup goals" remain at the site. What about the concentrations of lead and arsenic?

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Commented [c51]: "will be mitigated by the installation of the TSCA cap" or should it say "is being mitigated by the TSCA cap."

Commented [c52]: What is the actual name of the school: "Aspire Public School" or "College for Certain School?"

- Several planter areas.

The mitigation measures/engineering controls that comprise the cap systems are illustrated on Figure ~~2~~3.

3. Summary of Engineering Controls

The remedy described in the PCB Cleanup Completion Report ~~TSCA Report~~ was the on-site containment of PCB-containing soil using engineering controls in the form of a cap placed over site soil to prevent or minimize exposures (ARCADIS 2013). The cap includes the placement of buildings or other barrier materials including, but not limited to, concrete, asphalt, clean fill, or landscaping. Hardscape and landscape engineering cap systems installed at the school site are summarized on Figure ~~2~~ 3 and are described in Section~~s~~ 3.1 below.

Commented [c53]: What TSCA report?

Figure ~~2~~ 3 is a site plan showing the mitigation measures/engineering controls that comprise the cap system.

3.1 Hardscape and Landscape Cap Designs

Hardscape and landscape cap systems, as identified in the letter from ARCADIS to EPA entitled "Proposed Toxic Substance Control Act (TSCA) Cap for Pavement Areas – Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California," dated April 25, 2011 (ARCADIS 2011a), and approved by the U.S. EPA in a letter to CFC dated June 16, 2011 (U.S. EPA 2011b), were emplaced across the school site and include: a two-story building, concrete and asphalt paved areas, and an asphalt parking lot. Hardscape cap systems consist of multiple layers of differing materials (i.e., imported base rock and asphalt or concrete).

In the landscaped and planter areas (see Figure ~~2~~3), the native soil was covered by a minimum of 12 inches of clean fill over ~~cement~~ cement-treated native soil. In accordance with a request from the U.S. EPA, samples of the imported soil were collected and analyzed in accordance with a Soil Sampling Plan (ARCADIS 2011b). The results of these samples indicated that the imported soil met the requirements for imported soil (i.e., were below the cleanup criteria for PCBs, lead, and arsenic). ~~The lab reports for these samples are included as Appendix B.~~

These areas will be properly maintained (i.e., ~~periodically~~ inspected annually and replenished with additional clean fill, as necessary, to ensure that the ~~cement~~ cement-

treated native soil is adequately covered). Soil to be used to replenish the planters will be commercially available top soil provided by a landscaping contractor as required. The key objectives to replenish the imported soils in the landscape and planter areas are to prevent disturbance of the cement ~~–~~ treated native soils and mixing of those native soils with existing clean soils and those clean soils that may be used to replenish the landscape and planter areas.

Annual inspections at the Site will include inspection of the landscape and planter areas to confirm that vegetable gardens are not ~~been~~being grown at the school site as part of any school curriculum that may end up being consumed by students or others at the school site.

4. O&M Inspections

4.1 ~~Periodic~~ Annual Inspections

~~Periodic~~ Annual inspections of the ~~engineering controls~~cap will be conducted ~~annually~~, and will be performed by the O&M Professional along with the O&M Coordinator. As described in Section 1.4 the O&M professional is defined as a California-registered engineer or geologist with expertise in conducting soil investigation and remediation (e.g., an engineer or geologist who is familiar with the cap system installed at the school site). The O&M Coordinator will accompany the O&M Professional during the annual inspection.

The purpose of the annual inspection is to assess the condition of the cap, assess changes in site conditions or usage, descriptions of any on-site construction activities, or any other significant information related to the PCB engineering controls that may have taken place over the previous twelve months. If applicable the inspection will also review the completion of any repairs that were made to the cap.

~~school maintenance staff, under the direction of the O&M Coordinator and O&M that require repair.~~

~~School employees who are assigned to conduct O&M inspections will be responsible for:~~The key components of the inspection will be to identify the following:

1. Cracks in the cap measuring greater than 0.25 inches wide and 3 inches long; ~~(~~

2. ~~1)~~ Identification of any areas of the cap requiring ~~required~~ repairs;

Commented [c54]: What kind of schedule is "periodically?" This section should make reference to the inspection, maintenance, and repair schedule. In addition, what will be the source of soils to replenish the landscape areas and planters? What steps will be taken to ensure that soil for use to replenish the landscape and planters does not contain any contaminants above the site cleanup levels such as PCBs, arsenic, and lead? In addition, the key objectives to replenish clean soils in the landscape and planter areas are to prevent disturbance of the cement treated native soils and mixing of those native soils with existing clean soils and those clean soils that may be used to replenish the landscape and planter areas. In what section of this document is the matter of replenishing clean soils in landscape and planter areas addressed? Further, routine inspections at the site must include inspection of the landscape and planter areas to confirm that vegetable gardens are not been grown at the school site as part of any school curriculum that may end being consumed by students or others at the school site.

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Commented [c55]: This is inconsistent with Sections 4.1 and 4.2 but consistent with Section 1.4.2. Please reconcile these discrepancies.

Commented [c58]: This is an incomplete sentence.

3. ~~(2)~~ Documentation of changes in site conditions or usage;

4. ~~(3)~~ Description of any on-site construction activities; ~~and/or~~

5. A qualitative evaluation of the amounts of cover (soil) in the landscaped areas. Should additional soil be required, in the landscaped areas, commercially available soil will be imported to the Site within 60 days of the discovery of the need for more soil; ~~.~~ and

6. Complete Inspection Checklist for Engineering Control (Appendix A).

~~1. (4) any other significant information related to the effectiveness of the cap . Examples of such conditions include cracks in caps or sloped areas, soil movement, rivulets, run-on or run-off, and visible bare soil.~~

The annual inspections will be completed in August or September near the beginning of the school year.

During inspections, items identified for required maintenance will have a specified action date for completion of the required repairs. The O&M Coordinator is responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. The O&M Coordinator will notify representatives of Aspire-CFC of any failures of the engineering controls that have not been repaired within 30 days of discovery; such notifications will include a proposed schedule for completion of the required repairs and maintenance.

The Annual Inspection Summary Report will be prepared within 60 days after completion of each annual inspection, in accordance with the reporting requirements specified in Section 6.2 of this O&M Plan. The ~~Periodic~~ annual inspection reports will be submitted to the U.S. EPA and the ACEH and maintained at the school site. ~~School employees who conduct periodic inspections will take photographs during each inspection for documentation, as appropriate, to demonstrate stability and/or failure of engineering controls~~.

The O&M Professional and O&M Coordinator will be responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. ~~Copies of periodic inspection reports will be included in the Annual Inspection Summary Reports and Five-Year Reviews~~.

Commented [c59]: Are construction activities currently happening at the school or planned to happen in the future at the school? If so, this document does not adequately address notifications to USEPA and the Alameda County Department of Health. The integrity of the cap is to be maintained in perpetuity and modifications to the cap must be requested in writing and conducted after approved by these agencies.

Construction is not takling place at the Site

Commented [c60]: How soon after discovering that clean soils need to be added to landscape and/ or planter areas will clean (as demonstrated by laboratory analysis) soil be added to those areas?

Commented [c61]: Such reports should be made available to the agencies identified in Comment 56. In addition, we recommend that a table summarizing the inspection, maintenance, and repair schedule for the cap be developed and included in the land use covenant and this document. Such schedule should identify the types of inspections that will be conducted and associated cap locations. Schedules to repair the cap must also be included.

Commented [c62]: All these reports should be submitted to the agencies identified in Comment 56.

Commented [c63]: What is the basis for the Five Year Reviews and what is the purpose of those reviews? To whom will the inspection reports and repair completion reports be submitted for review and acceptance?"

4.2 ~~Inspections for~~ Unplanned Events

School employees will contact the O&M Coordinator ~~and also conduct inspections of engineering controls immediately~~ following unplanned events (e.g., fires, broken utility lines, floods and/or heavy rain, or seismic events) during which caps may be compromised and/or PCB-containing soils may be exposed. "Heavy" rain will be defined as rainfall exceeding 0.50 inches in one hour in Oakland, California. "Significant" seismic events will include those earthquakes occurring nearby, of a magnitude exceeding 5.0 on the Richter scale. The O&M Coordinator will document all inspections and required repairs or maintenance, and incorporate such documents into the Annual Inspection Summary Report.

The O&M Professional and O&M Coordinator will notify ~~CFC~~the ACEH and U.S. EPA of any failures (i.e., compromised integrity or possible breach in the cap~~PCB exposures~~) of the engineering controls resulting from unplanned events that are not repaired within 14 days of discovery; such notifications will include a proposed schedule for completion of the required repairs and maintenance.

The O&M Professional and O&M Coordinator will inspect the cap within 5 days following seismic activity greater than a 5.0 Richter scale magnitude earthquake. The findings of this inspection will be summarized in a letter that will be submitted to the ACEH and U.S. EPA within 60 days after the inspection.

~~The first annual inspection will be completed in August prior to the beginning of the school year, and all subsequent annual inspections will be completed a week prior to the start of the school year.~~

~~The O&M Professional will inspect the cap annually. t~~The O&M Coordinator ~~may accompany the O&M Professional during the annual inspection. The purpose of this inspection is to identify and review completion of any required repairs, changes in site conditions or usage, descriptions of any on-site construction activities, or any other significant information related to the PCB engineering controls that may have taken place over the previous twelve months. All annual inspections will include an evaluation of the amounts of clean fill cover remaining in the landscaped areas. .~~

~~During inspections, all items identified for required maintenance will have a specified action date for completion of the required repairs. The O&M Coordinator is responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. The O&M Coordinator~~

Commented [c64]: What are the qualifications of school maintenance employees and the Schools O&M Coordinator as to know what and how to inspect the cap (and the rest of the school if necessary) after a seismic event? We believe that an engineer or a geologist with relevant expertise should be conducting inspections after unplanned events such as seismic activity has occurred. Seismic activity less than a 5.0 Richter scale may also cause damage depending on the type of fault and earthquake that may occur. USEPA Region 9 does not have in-house expertise on seismic matters and such issues should be discussed with the appropriate professionals at the state and County level government.

Commented [c65]: This is inconsistent with Sections 4.1 and 4.2 but consistent with Section 1.4.2. Please reconcile these discrepancies.

Commented [c66]: How soon after discovering that clean soils need to be added to landscape and/ or planter areas will clean (as demonstrated by laboratory analysis) soil be added to those areas?

~~will notify representatives of CFC of any failures of the engineering controls that have~~

~~The Annual Inspection Summary Report will be prepared within 60 days after completion of each annual inspection, in accordance with the reporting requirements specified in Section 6.2 of this O&M Plan.~~

~~**4.3 Annual Inspections**~~

5. Intrusive Work Activities

Prior to conducting intrusive work activities on the cap, ~~O&M personnel will submit all school site construction and maintenance work order requests to the O&M Coordinator. T~~the O&M Professional and O&M Coordinator will provide a work plan presenting the scope of the activities to be conducted to the U.S. EPA and ACEH.~~evaluate, in writing, whether if or not the activities described in the work orders are considered "non-PCB-intrusive" or "PCB-intrusive".that~~ This work plan must be approved by U.S. EPA and/or the ACEH prior to commencement of the intrusive work activities.~~CFC~~ These ~~"PCB~~-intrusive~~"~~ activities ~~are prohibited at the school site unless~~must be conducted in accordance with applicable provisions of this O&M Plan, the Land Use Covenant, and the ~~Soil Management Plan~~SMP~~:~~ (Appendix B). ~~"PCB-i~~Intrusive~~"~~ work includes any construction or maintenance activities that encounter soil beneath the cap regardless of the location of those soils (except soils that were ~~imported to the landscape and/or planter areas~~ demonstrat~~inged~~ not to contain PCBs and other contaminants and were imported to the landscape and/or planter areas).~~disturb PCB-containing soils.~~ These activities include ~~ing~~ but are not limited to: digging, drilling, excavating, grading, repairing, removing, trenching, filling, gardening, and other soil movement that may penetrate or otherwise compromise the caps in place, thereby opening pathways for possible human exposures to PCB. ~~If work is determined to be PCB-intrusive, the O&M Coordinator will ensure that work practices are followed as specified in Section 5.2 of this O&M Plan.~~ .

~~**5.1 Non-PCB-Intrusive Work**~~

~~Construction, repair, and/or maintenance activities at the school site are restricted, in accordance with this O&M Plan, only when exposures of PCB-containing soils are reasonably anticipated or when releases occur. "Non-PCB-intrusive work" includes construction, repairs, and/or maintenance activities at the school site where exposure of PCB-containing soils is not anticipated, and where the integrity of the engineering~~

Commented [c67]: Such reports should be made available to the agencies identified in Comment 56. In addition, we recommend that a table summarizing the inspection, maintenance, and repair schedule for the cap be developed and included in the land use covenant and this document. Such schedule should identify the types of inspections that will be conducted and associated cap locations. Schedules to repair the cap must also be included.

Commented [c67]: Such reports should be made available to the agencies identified in Comment 56. In addition, we recommend that a table summarizing the inspection, maintenance, and repair schedule for the cap be developed and included in the land use covenant and this document. Such schedule should identify the types of inspections that will be conducted and associated cap locations. Schedules to repair the cap must also be included.

Commented [c68]: Activities that may result in a breach of the physical integrity of the cap and/or disturbance and exposure of soils beneath the cap (including soils in landscape and planter areas) must be conducted in accordance with the land use covenant for the school site.

Commented [c69]: In reference to "PCB intrusive" versus "non-PCB intrusive," what is the difference? Soils beneath the cap should be considered to contain PCBs regardless of the location of those soils (except soils that were imported to the landscape and/or planter areas demonstrating not to contain PCBs and other contaminants). During geotechnical and grading work soils from locations with samples exceeding the PCB cleanup level were mixed with other soils at the site that met the cleanup level. In addition the prohibitions mentioned in this paragraph must be included in a land use covenant for the school. Except as provided by a land use covenant, the cap must not be penetrated or compromise in any other way. Modifications to the cap must be approved by USEPA and/or the Alameda County Department of Health based on plans for such modifications and notifications of such intent by College for Certain.

Commented [c70]: The O&M Coordinator may not have the authority to do what this paragraph says in light of a land use covenant for the school site and need to obtain approval from the agencies identified in Comment 56.

~~controls is not compromised. The following procedures are required when conducting~~ and U.S. EPA in the form of a work plan for review and approval prior to commencing with the work. These activities can result in modifications to the cap and the cap must be repaired consist~~ing~~ent with agency~~-~~-approved plans and design. The following procedures are required ~~by CFC~~ when performing ~~PCB~~-the following intrusive construction, repair, and/or maintenance activities to: (1) ensure that safeguards are in place to prevent or minimize PCB exposures to anyone at the school site; (2) prevent untrained or unauthorized personnel from performing intrusive work in PCB areas; and (3) restore the integrity of the in-place engineering controls if they are impaired or compromised by such activities. The O&M Coordinator will oversee these procedures for all PCB-intrusive work (as defined in Section 5 of this O&M Plan) performed by, or on behalf of, CFC at the school site:

- ~~The O&M Coordinator will provide information regarding the location of cap systems and soils containing PCB to selected contractors and O&M personnel to minimize the likelihood of PCB intrusion;~~
- ~~The O&M Professional and/or O&M personnel will conduct inspections during construction and/or maintenance activities at the school site to ensure PCB-containing soils are not being disturbed; and~~
- ~~In the event that PCB-containing soils are inadvertently disturbed or the integrity of the engineered controls is compromised, the O&M Coordinator will be responsible for implementing the appropriate procedures in accordance with the provisions described in Sections 5.2 and 5.3 of this O&M Plan.~~

~~5.1 PCB Intrusive Work~~

Proposed modifications and disturbances to the cap must be conveyed to the ACEH and U.S. EPA in the form of a work plan for review and approval prior to commencing with the work. These activities can result in modifications to the cap and the cap must be repaired consist~~ing~~ent with agency~~-~~-approved plans and design. The following procedures are required ~~by CFC~~ when performing ~~PCB~~-the following intrusive construction, repair, and/or maintenance activities to: (1) ensure that safeguards are in place to prevent or minimize PCB exposures to anyone at the school site; (2) prevent untrained or unauthorized personnel from performing intrusive work in PCB areas; and (3) restore the integrity of the in-place engineering controls if they are impaired or compromised by such activities. The O&M Coordinator will oversee these procedures

Commented [c71]: Native soils (including those mixed with cement) beneath the cap including landscape areas and planters are assumed to contain PCBs so there is not a location that one can say has soils with no PCBs. An exception is the imported soil added above native soils in landscape and planter areas where the imported soils have been or will be tested to confirm the concentration of PCBs and other site contaminants do not exceed the cleanup goals established for each contaminant at the site.

Commented [c71]: Native soils (including those mixed with cement) beneath the cap including landscape areas and planters are assumed to contain PCBs so there is not a location that one can say has soils with no PCBs. An exception is the imported soil added above native soils in landscape and planter areas where the imported soils have been or will be tested to confirm the concentration of PCBs and other site contaminants do not exceed the cleanup goals established for each contaminant at the site.

Commented [c72]: This section has to be rewritten in context to a land use covenant and the authority of regulatory agencies to approve or disapprove modifications to the cap. See Comment 66. See e-mail message transmitting this version of the cap maintenance plan with annotated comments. If certain activities result in modifications to the cap, the cap must be repaired consisting with agency approved plans and design. Soils that were mixed with cement for geotechnical purposes are assumed to contain PCBs. See Comment 52, 66,

Commented [c72]: This section has to be rewritten in context to a land use covenant and the authority of regulatory agencies to approve or disapprove modifications to the cap. See Comment 66. See e-mail message transmitting this version of the cap maintenance plan with annotated comments. If certain activities result in modifications to the cap, the cap must be repaired consisting with agency approved plans and design. Soils that were mixed with cement for geotechnical purposes are assumed to contain PCBs. See Comment 52, 66,

for all PCB-intrusive work (as defined in Section 5 of this O&M Plan) performed by, or on behalf of, CFC at the school site:

- Provide information regarding the location of the cap systems, cross-section construction details, and locations of all soils containing PCB to selected contractors;
- Verify that selected contractors and their employees will comply with federal and state Occupational Safety and Health Administration~~OSHA~~ requirements;
- Require that construction and maintenance work be performed in such a manner to meet or exceed the existing cap conditions;
- Evaluate timelines, school, and work schedules to ensure that PCB-intrusive work is completed as soon as possible to minimize exposure risks;
- Require reasonable restrictions to school site access to reduce exposures to non-workers;
- Implement dust control practices that utilize water;
- Manage any PCB-containing or impacted soils brought to the surface in accordance with the ~~Soil Management Plan~~SMP (see Appendix ~~D~~B), and in compliance with applicable, relevant, and appropriate provisions of state and federal law; and
- Comply with all applicable, relevant, and appropriate federal, state, and local requirements.

5.2 Standard Cap Repair

Commented [c73]: See Comments 52, 66, and 67.

~~Whenever possible, PCB-~~Iintrusive construction or maintenance work activities will be conducted to meet or exceed the existing cap conditions (see Figure ~~2~~3).

The procedures to be followed during ~~PCB-~~intrusive work include the following:

- Stabilization of site;
- Limitation on site access, as appropriate;

- Management of excavated soils, including dust control, work site access, and soil segregation;
- Cap repair, or fill replacement procedures, to match the existing cap conditions; and
- Evaluation and use of new fill materials.

7. ~~6.~~ Reporting and Record-Keeping

Reports concerning inspection, maintenance, and repair of the cap will be submitted to U.S. EPA Region 9 and the ~~Alameda County Department of Health~~ACEH. In addition, plans to modify the cap must be submitted to these agencies for approval before implementation.

Commented [c74]: Reports concerning inspection, maintenance, and repair of the cap must be submitted to USEPA R9 and the Alameda County Department of Health. In addition, plans to modify the cap must be submitted to these agencies for approval before implementation.

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6.1 Reporting Requirements

The O&M Coordinator will maintain records of training provided to O&M personnel, compile appropriate information, develop, and file the following reports at the school site in a timely manner:

- Annual Inspection Summary Reports
- Completion Reports for PCB-intrusive work
- ~~Five-Year Review Reports~~

6.2 Annual Inspection Summary Reports

Commented [c75]: See Comments 52, 56, and 69.

Annual Inspection Summary Reports will summarize the findings from annual inspections, and will document completions, delays, or failures to repair any items identified as needing repairs. The Annual Inspection Summary Report will be signed by the O&M Professional and O&M Coordinator, and will be completed no later than 60 calendar days after the annual inspection has been conducted. Annual Inspection Summary Reports will follow the format outlined in Appendix ~~E~~C, and will be included and maintained in files at the school site.

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Annual Inspection Summary Reports will include the following:

- ~~Copies and a summary of the signed periodic inspection checklists completed~~ of the conditions ~~and amounts of cap materials remaining over the geotextile/PCB soil, and if necessary, analytical sampling data and analyses~~;

- Results of the annual visual inspection, including measurements and an evaluation of the conditions ~~and amounts of cap materials remaining over the geotextile/PCB soil, and if necessary, analytical sampling data and analyses~~;

- A description of actions taken since completion of the previous O&M annual inspection, including:

    - Any repairs to the installed cap remedy that were identified and carried out;

    - Any significant changes in site conditions or usage (e.g., paving, grading, utility trenching, playgrounds, or picnic areas); and

    - Any additional on-site construction or other significant information that may impact the installed cap remedy (e.g., installation of portable buildings or maintenance facilities);

- A description of any maintenance or repairs identified as needed during the O&M annual inspection;

- A description of any recommendations for O&M Plan modification;

- A description of actions planned or expected to be undertaken before the next O&M annual inspection that will impact the in-place engineering controls;

- Recommendations concerning any repairs to the installed caps that are still needed;

- Photographs depicting site conditions with brief identifying captions or descriptions. During the annual inspection, the O&M Professional will take photographs for documentation, as appropriate, to demonstrate stability and/or failure of engineering controls;

- Conclusions regarding the ongoing effectiveness of the cap systems; and

- Documentation of any additional PCB investigation, monitoring, and/or mitigation activities.

6.3 Completion Reports for ~~PCB~~ Intrusive Work

Commented [c77]: See Comments 52 and 56 – 67.

Within 60 days of completion, ~~PCB~~ intrusive work activities will be documented in a Completion Report prepared by the O&M Professional. Each Completion Report will include the following information:

- Date work was performed;
- Work location, with maps and figures;
- Work activities performed, including restoration of cap systems where necessary;
- Work practices taken to prevent potential exposures;
- Variance or modifications (if any) of the existing cap conditions; and
- Summary of finished site conditions.

The O&M Professional will incorporate all Completion Reports for PCB-intrusive work conducted during the year into the Annual Inspection Summary Report. ~~The format for Completion Reports will follow the outline provided in Appendix F.~~

~~6.4 Five-Year Review Reports~~

Commented [c78]:

~~Five-Year Reviews will be conducted to evaluate ongoing remedy effectiveness where PCB-affected soil remains in place. The purpose of five-year reviews is to determine whether the remedy: (1) remains protective of human health and the environment; (2) is functioning as designed; and (3) is maintained appropriately by O&M activities. Each Five-Year Review will be conducted by the O&M Professional, who will prepare and sign the Five-Year Review report, following the outline in Appendix G.~~

~~All engineering controls will be inspected by the O&M Professional in the same manner used during the annual inspection (see Section 6.2). The purpose of the five-year inspection is to identify and review completion of any required repairs, changes in site conditions or usage, descriptions of any on-site construction activities, or any other significant information related to the engineering controls that may have taken place over the previous five years.~~

6.4 Record-Keeping and Retention

Commented [c79]:

All documentation records (e.g., data, reports) prepared under this O&M Plan will be maintained by the O&M Coordinator at the school site. The records will include, but are not limited to:

- Periodic inspection checklists, Annual Inspection Summary Reports, ~~Five-Year Review Reports,~~ Completion Reports for ~~PCB~~ intrusive work, and photographs associated with all of the above;
- Records of public inquiries for information about PCB at the school site; and
- Investigation and mitigation documents (e.g., the Combined Environmental Mitigation Plan and Cap Completion Report).

All records will be preserved by the O&M Coordinator for a minimum of five years after the conclusion of each relevant activity.

Due to the significant volume of paper that could be generated, the O&M Coordinator may elect to maintain paper copies of reports from the most recent 12 months ~~and the latest five-year review report, if applicable~~, and preserve the rest as electronic files.

7. Site Access

At all reasonable times and upon request, the O&M Coordinator will arrange for O&M personnel to have access to the school site. During intrusive activities, access to the work area will be limited by the placement of temporary fencing around the work area.

~~8. Variance, Modification, or Termination of the O&M Plan~~

~~The O&M Coordinator may seek variance, modification, and/or termination of this O&M Plan at any time during the life cycle of the cap remedy. "Variance" refers to possible release from specific individual O&M Plan requirements for a limited time period, while "modification" refers to the permanent revision of specific requirements. Variance, modification, or termination of the O&M Plan may be allowed if:~~

- ~~Such variance, modification, or termination is protective of public health and safety and the environment.~~

Commented [c80]: From whom or which entity will variance, modification, and/or termination will be sought? Termination will not be granted given the purpose of the cap. Also, PCBs remain beneath the cap and based on the statistical evaluation of analytical results for final samples collected at the site, PCBs remain at the site above the PCB cleanup level.

8. O&M Plan Modifications

When long-term performance of the cap remedy has been confirmed, the O&M Coordinator may seek to modify the requirements of the O&M Plan based on site-specific monitoring results and/or conditions. The request to modify the O&M Plan will be submitted in writing to ACEH and U.S. EPA in the form of a work plan for review. O&M Plan modifications may include the following:

- Changes in the frequency of O&M activities;
- Modification, replacement, or addition of components to the O&M Plan if O&M activities fail to achieve the objectives of protecting public health, safety, and the environment; and/or
- Evaluation, design, construction, and/or operation of additional remedial measures to achieve the O&M objectives.

~~8.2 Termination of O&M Plan~~

~~Based on review of a Five-Year Review report or a subsequent Annual Inspection Summary Report, CFC may determine whether the cap remedy has met either of the following performance criteria required for termination of O&M activities:~~

- ~~Availability of new scientific information resulting in changes or modifications to the U.S. EPA's technical criteria for evaluating unacceptable risk levels for PCB in soils; and/or~~
- ~~Change in land use (i.e., the school site is no longer used as an educational facility).~~

~~Prior to the sale, lease, or sublease of the school site, or any portion thereof, the O&M Coordinator will provide the buyer, lessee, or sub-lessee with notice that PCB-containing soils are located on or beneath the school site.~~

~~Because caps are not anticipated to have any adverse impacts on building foundation systems or other components, removal and/or decommissioning of the caps following termination of the O&M activities will not be required.~~

Commented [c81]: What procedures will be followed to seek modification of USEPA approved plans?

Commented [c82]: The O&M Plan will not be terminated. The decision contemplated in Section 8.2 is a regulatory agency decision. The cap is to be maintained in perpetuity as required in USEPA's approval of the PCB cleanup. The PCB cleanup level was not met at the site and a cap has been installed to mitigate the risks posed by PCBs exceeding the cleanup level. If the property is sold and the structures currently present at the site are to be demolished, to allow a different use of the property, then plans to conduct such activities must be submitted beforehand to USEPA and Alameda County Department of Health. In relation to PCBs being found to be less toxic in the future, that is not the current trend where the opposite has been determined.

Commented [c83]: That notification must be done in the land use covenant that UIZSEPA R(has required be recorded for the property addressing the cap engineering controls and any other types of controls necessary at the site to prevent exposure to PCB contamination.

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Commented [c84]: What does this paragraph mean?

9. References

Alameda County Environmental Health (ACEH). 2009. Final CAP Approval for Fuel Leak Case No. RO0000411 and GeoTracker Global ID T0600101950, Pacific Electric Motor, 1009 66th Avenue, Oakland, CA 94621. August 13.

ARCADIS U.S., Inc. (ARCADIS). 2009a. Revised Corrective Action Plan, Proposed Aspire High School Site, 1009 66th Avenue, Oakland, California. July 17.

———. 2009b. Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California. October 23.

———. 2009c. Conditional Approval of the Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification, Former Pacific Electric Motors Facility, 1009 66th Avenue in Oakland, California. November 18.

ARCADIS. 2010a. Toxic Substance Control Act Risk-Based Cleanup Notification and Certification 40 CFR 761.61(c), Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California. January 14.

———. ~~2010a~~2010b. Implementation of the Toxic Substances Control Act Self-Implementing Cleanup Notification at the Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California. August 12.

———. ~~2010b~~2010c. Soil Removal Action Completion Report, College for Certain, LLC, Former Pacific Electric Motors, 1009 66th Avenue, Oakland, California (Fuel Leak Case No. RO0000411). September 15.

———. 2011a. Proposed Toxic Substance Control Act (TSCA) Cap for Pavement Areas – Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California. April 25.

———. 2011b. Soil Sampling Plan for Soil to be Imported for Use in the Proposed Landscaped Areas at the Former Pacific Electric Motors Facility, 1009 66th Avenue, in Oakland, California. June 11.

———. 2013~~a~~. Revised Draft Addendum - PCB Cleanup Completion Report, College for Certain, 1009 66th Avenue, Oakland, California. ~~Addendum to Implementation of the Toxic Substances Control Act Self-Implementing Cleanup Notification at the Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California.~~

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Commented [RG85]: Completion report?

~~———. 2013b. Soil Management Plan for Soil for the Former Pacific Electric Motors Facility, 1009 66th Avenue, in Oakland, California. March.~~

Decon Environmental Services, Inc. (Decon). 2002a. Remediation Project Report for Pacific Electric Motor Co., 1009 66th Avenue, Oakland, CA 94612. July 9.

———. 2002b. Remediation Project Report – Addendum for Pacific Electric Motor Co., 1009 66th Avenue, Oakland, CA 94612. October 2.

United States Environmental Protection Agency (U.S. EPA). 2009a. Polychlorinated Biphenyls – U.S. EPA Conditional Approval Under-40 C.F.R. § 761.61(a), Toxic Substances Control Act -- "Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California." November 13.

———. 2009b. U.S. EPA. Email Message from Carmen Santos to Ron Goloubow; Subject: PCBs: Aspire School Site in Oakland, California - Conditional Approval of SAP and LFR's November 18, 2009 Letter. November 25.

———. 2011a. Aspire Public Schools 1009 66th Avenue, Oakland, California U.S. EPA Conditional Approval of Polychlorinated Biphenyls Cleanup Notification Under Toxic Substances Control Act New request for Additional Cap Modifications. April 5.

———. 2011b. Aspire Public Schools 1009 66th Avenue, Oakland, California U.S. EPA Conditional Approval of Polychlorinated Biphenyls Cleanup Notification Under Toxic Substances Control Act New request for Additional Cap Modifications. June 16.

W.A. Craig, Inc. 1995a. Final Closure Plan for Underground Storage Tank Removal for Pacific Electric Motor Co., 1009 66th Avenue, Oakland, CA 94621. March 14.

———. 1995b. Correspondence to ACDEH via facsimile. Attached soil and water sample results, and next phase of work due to contamination in the soil and pit water. March 31.

———. 1995c. Subsurface Environmental Investigation for Pacific Motor Co., 1009 66th Avenue, Oakland, CA 94621. May 16.

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———. 1997. Excavation and Sampling Report for Pacific Electric Motor Co., 1009 66th Avenue, Oakland, CA 94621. May 12.

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Appendix A

Inspection Checklist for Engineering Controls

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Appendix B

Soil Management Plan

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Appendix C

Annual Inspection Summary Report Outline

Appendix D

~~Compliance Report Outline~~

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Appendix E

~~Five-Year Review Report Outline~~